PART 1 - GENERAL

1.01 SUMMARY

.1 Section Includes:

.1 Firestopping of all penetrations through fire barriers.
.2 Smokestopping of all penetrations through smoke barriers.

.2 Work includes firestopping of all penetrations through fire barriers. Work also includes installation of smoke barriers where required or where indicated on drawings.

.3 Work Not Included: Repairing penetrations made in error and repairing penetrations which are too large to be sealed by the methods indicated; these are to be repaired using the original material of the construction.

.4 Products Furnished but not Installed:

.1 Sleeves which are an integral part of the firestopping assembly but which must be set by installer of other construction.

.5 EACH CONTRACTOR is responsible for firestopping openings made for their work.

1.02 DEFINITIONS

.1 Fire Barrier: Any wall, floor, ceiling, or roof which is indicated as having a fire-resistance rating.

.2 Smoke Barrier: Any wall, floor, ceiling or roof which is indicated as being designed to prevent passage of smoke and gases; may be indicated as Asmoke barrier,@ Asmoke partition,@ Asmoke wall,@ etc.

1.03 SUBMITTALS

.1 Schedule of Firestopping: Complete list, for approval, of penetrations to be sealed, indicating location, fire rating of penetrated assembly, identification of penetration seal to be used, fire rating of penetration seal, and evidence of acceptable testing.

.2 Schedule of Smokestopping: Complete list, for approval, of penetrations to be sealed, indicating location, construction of penetrated assembly, and identification of penetration seal to be used.

.3 Product Data: Complete product and system description, including tested assembly details, installation instructions, and limitations on use.

.4 Maintenance Data: Include detailed instructions for repair and for modification due to changes in penetrating items.

.5 Final inspection report(s).

1.04 QUALITY ASSURANCE

.1 Testing Requirements: Testing shall have been conducted or witnessed by an independent testing agency acceptable to governing authorities.

.1 Test Method: ASTM E 119

.2 Conduct tests with a measurably higher pressure inside the chamber than outside.

.3 The listing of the assembly to be used in the current edition of one of the following classification guides will be considered evidence of acceptable testing:

.1 Underwriters Laboratories Inc. AFire Resistance Directory.@
.2 Factory Mutual System AApproval Guide.@
.3 Warnock Hersey ACertification Listings.@

1.05 DELIVERY, STORAGE, AND HANDLING

.1 Coordinate delivery of products to minimize storage time at site.

.2 Deliver products to project site in original unopened containers bearing the name of the manufacturer, product name, type, and testing agency=s identification mark.

.3 Store products in accordance with manufacturer=s instructions.

1.06 PROJECT CONDITIONS

.1 Coordination Meeting: Prior to the start of work which involves cutting penetrations, conduct a meeting with installers of such work to identify fire and smoke barriers and required configurations of penetrations and to discuss the proper procedures and time schedule for cutting, patching, and sealing penetrations in such assemblies, with emphasis on avoiding unnecessary cutting and patching.

1.07 SEQUENCING AND SCHEDULING

.1 Perform firestopping and smokestopping work after completion of work which penetrates fire and smoke barriers, but prior to covering up or eliminating access to the penetration. Coordinate with installers of such other work.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

.1 Firestopping Materials:

.1 Manufacturers: Provide products complying with requirements of the contract documents and made by one of the following:

.1 Hilti, Inc.
.2 Grace Construction Products
.3 John Manville
.4 3M Fire Protection Products

2.02 MATERIALS

.1 Firestopping Materials: Provide penetration seal assemblies whose fire-resistance ratings have been determined by testing in the configurations required and which have fire-resistance ratings at least a high as that of the fire-rated assembly in which they are to be installed.

.1 It is the contractor=s responsibility to determine the types of penetrations to be sealed and to select appropriate firestopping assemblies.

.2 If a tested assembly is not available for a particular penetration configuration, modify the penetration configuration to suit available assemblies; do not modify assembly configuration except as specifically stated in the test report or as approved by the authority having jurisdiction.

.3 Provide products which:

.1 Allow normal expansion and contraction movement of the penetrating item without failure of the penetration seal.
.2 Emit no hazardous, combustible, or irritating by-products during installation or curing period.
.3 Do not require special tools for installation.

.2 Smokestopping: Use any gunnable or pourable joint sealant suitable for the application; use only fully curing types where accessible in the finished work. Provide products which:

.1 Allow normal expansion and contraction movement of the penetrating item without failure of the penetration seal.
.2 Emit no hazardous, combustible, or irritating by-products during installation or curing period.
.3 Do not require special tools for installation.

.3 Labels: Red, permanent marking using the words AFire-Rated Assembly - Do not disturb - See maintenance instructions@ and the testing agency designation, or equivalent as

approved by the authority having jurisdiction. For marking firestopping and smokestopping assemblies, use self-adhesive tape or wired-on labels.

PART 3 - EXECUTION

3.01 EXAMINATION

.1 Preinstallation Inspection: Inspect all fire and smoke barriers for penetration of any type; mark or otherwise identify all penetrations indicating action required: 1) repair; 2) firestopping; or 3) smokestopping.

.1 Conduct inspection prior to covering up or enclosing walls or ceilings.
.2 Conduct inspection jointly with authorized representative of authority having jurisdiction.
.3 Conduct inspection jointly with the architect.

3.02 PREPARATION

.1 Installation Meeting: Prior to start of work, conduct a meeting to verify that the installation instructions and procedures required are understood by the installers.
.1 The following shall attend this meeting:
.1 General Contractor.
.2 Installers of firestopping.
.3 Installers of smokestopping.
.4 Firestopping manufacturers= representative.
.5 The Architect.
.6 Representative of authority having jurisdiction.

.2 Prepare penetrations in accordance with the material manufacturer=s instructions.

3.03 INSTALLATION

.1 Install firestopping materials in exact accordance with manufacturer=s instructions and the conditions of the testing; provide all accessory materials required.

.2 Remove combustible forming materials, unless they are a required component of the tested assemble.

3.04 PERMANENT IDENTIFICATION OF PENETRATIONS

.1 Near fire and smoke barriers, mark each exposed penetration with label identifying it as a fire-stopped or smoke-stopped assembly.

3.05 FIELD QUALITY CONTROL

.1 Obtain the services of firestopping material manufacturer=s representative to instruction

installers and to inspect the completed installations for correctness.

.2 Inspect completed installations for completeness and correct installation.
 .1 If installed work is to be covered in completed work, inspect and obtain approval prior to covering.
 .2 Obtain the approval of the material manufacturer.
 .3 Submit report of inspection to the architect.

3.06 CLEANING

.1 Clean up excess material adjacent to penetrations promptly; use methods and materials approved by the manufacturers of the penetration seals and of surfaces to be cleaned.

3.07 PROTECTION

.1 Protect installed work during curing period.

.2 Protect work from damage from construction operations using substantial barriers if necessary.

.3 Repair damaged materials in accordance with manufacturer=s instructions.

END OF SECTION 07270